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MEMORANDUM FOR: Director of Information Technology

25X1 FROM: Chief, Information Management Staff, DO

SUBJECT: OIT Support for IMS ADP Services

BACKGROUND

IMS is moving as rapidly as possible to automate all DO functions that could reasonably benefit from the application of data processing technology. Two important considerations motivate this initiative; (1) there are potentially great improvements in DO operational capabilities to be realized through the use of computer technology, and; (2) the expanding requirements levied on the DO, without any hope of significant manpower increases, make it mandatory to automate many current manual processes.

If this initiative is to be successful, however, IMS must rely heavily on services provided by OIT. A few years ago IMS was OIT's least sensitive major customer. All of the DO's data processing functions were performed within IMS. Any DO customer wishing to use IMS's computer services did so through IMS intermediaries and was, therefore, isolated from system response and availability problems.

25X1 Today over non-IMS DOers are on-line, and within the next few
25X1 years, this number will grow . Because of the time-critical nature of much of this work, systems must be available 24 hours a day, seven days a week. For some applications Saturdays are just as busy, if not busier, than the rest of the week. The DO Desk Officer often works a six day week. The result is that IMS has gone from being OIT's least sensitive customer to one of its most sensitive.

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IMS has attempted on many occasions to determine how the services it delivers to its customers is perceived. If the results of the many customer surveys IMS has done recently had to be summarized in a single statement, it would be, "The system is great when it works but you can't depend on its being up." For this reason a great deal of emphasis in this memorandum is placed on how system reliability might be improved.

In analyzing IMS's requirements, and its dependencies on OIT services, it is convenient to divide the total picture into seven major categories (this presumes that the current OIT CSPO effort will be taken over by OIR). Each of these categories is discussed in some detail below:

1. COMMUNICATIONS

Reliable, responsive communications services are the most critical aspect of the DO/OIT relationship; the telephones must work 100% of the time; unless the customer's workstations can connect to the required applications, all of the vast computational resources available to the DO are useless. Given the new on-line applications being developed in
25X1 the [redacted] Computer Center (e.g., electronic T & As, online training requests, etc.), all DO customers should be provided access to both the
25X1 Special Center and general purpose facilities (in [redacted] Center today).

As the first line of defense between the DO customer and OIT, IMS must have access to timely information on the condition of the network at all times so that the DO customer's interests can be represented adequately. Regardless of how bad a communications problem may be, it can't possibly be worse than the rumor mill represents it to be today.

Coordinated planning for future communications requirements is an area that also needs to be improved. All too frequently in the recent past, too few communications resources were available, even though requirements were clearly specified in IMS's CFRR (the yearly Computer Facility Resource Requirements paper), and measurement data indicated impending short-falls.

2. CABLE SERVICES

The cable delivery system is the life-blood of the DO. Without the timely and reliable dissemination of DO cables, the Directorate cannot operate. IMS is trying to convert customers from the use of hard-copy delivery (APARS) to what should be a much more attractive alternative - electronic delivery (MDS).

The high incidents of system outages today, however, make it a difficult option to sell. Over the past few months multi-hour outages have occurred far too frequently. A significant contributor to this poor availability is the fact that the cable delivery system is composed of a hodge-podge of poorly-integrated programs. This is perhaps the only significant availability problem area where the infusion of a small number of top-notch programmers could have an Agency-wide impact.

It may not be possible to build a completely failure-proof electronic system; however, we must try. If we cannot succeed, then a low-cost, simple, backup system is needed. For example, perhaps the important cable traffic (critics, flashes, etc.) could be spooled to a small, centrally located, stand-alone system that could print them when the regular electronic delivery system failed.

3. ELECTRONIC MAIL

AIM, the Agency's electronic mail service has been a big success in the DO. Not only has it streamlined the communications process for the
25X1 many DO customers who have access to it (approximately [redacted] people today), but it has been used to good effect as a means for handling some
25X1 special purpose DO requirements (e.g. the [redacted] Reporting functions).

25X1 The [redacted] systems are two of IMS's most successful projects.
25X1 Both use AIM to generate finished Intelligence Reports [redacted]
25X1 and IID for foreign reporting). [redacted]
25X1 [redacted] then reviewed, edited and coordinated through AIM, and finally disseminated, usually without ever having been converted to paper. This electronic process has alleviated the need for secretarial typing services, and has enabled both components to produce final products faster, and with fewer people.

Because of the heavy reliance of MDS-3 (the DO's version of SAFE Delivery 3) on AIM, IMS will be even more dependent on a high level of support for this excellent product in the future. Current AIM
25X1 enhancement projects [redacted]
25X1 [redacted] all play an important part in IMS's future plans for the DO.

For the past year or so AIM performance and availability in the DO has been very good (although many DO customers don't appreciate this fact because of other availability problems). To ensure that this high level of performance will not be eroded, great care must be taken to make sure that the technical level of the AIM development staff is maintained, and that enough hardware resources are available to AIM during peak loading periods.

4. OPERATIONS SERVICES

Within the past year a number of operational errors have caused long outages for DO customers (actually the blame could be shared almost equally between OIT and IMS personnel). The causes of these outages have been identified and should, at least theoretically, not happen again. The major concern for the future, however, is that with the implementation of MDS-3, the operational problem will become considerably more complex.

At the same time that complexity is increasing, both OIT and IMS are experiencing difficulties in staffing their operational elements with technically capable people. If operational problems are to be minimized in the future, greater cooperation between OIT operators and IMS customer services personnel must be encouraged. Recently a 3270 JES terminal was removed from the IMS Customer Services area by OIT. This terminal had been used to good effect to help analyze operational problems. Its removal is an example of the kind of parochial behavior that really shouldn't be encouraged in the future.
(If the systems are to stay up, everyone will have to contribute. This is especially true during off-hours when OIT coverage is low and IMS's customer services people are available to consult.)

Another area of IMS concern vis-a-vis computer operations, is security. Good security procedures dictate limiting the number of people who have access to critical facilities. The number of people in OIT who have access to the Special Center is very large. As a matter of fact, within OIT's Engineering and Operations Divisions, it is far easier to list those who don't have access than those who do.

5. HARDWARE SERVICES

In general, the computer system hardware provided by OIT has been very reliable over the past few years (this is especially true of the CPUs and DASD). Although some of the communications equipment could be better (specifically the Comtens), IMS's primary concern for the future is capacity to meet the anticipated growth in requirements.

OIT's latest Computer Systems Plan (dated July 1987) stipulated computer system upgrades, to be provided by OIT, in FYs 89, 90, and 91. These upgrades will most certainly be needed if MDS-3 is to be fully
25X1 implemented (providing MDS services to almost [redacted] users will require at least three 3090 class machines for VM and another for MVS).

Shortfalls in OIT's ability to meet this requirement early in the cycle (1989?) could possibly be tolerated if more 3081 class machines were made available. Using more, smaller machines would eventually become counter-productive, however, because of the limited ability of some other pieces of equipment to connect to multiple machines (e.g. Comtens, 6 CPUs; and DASD, 4 CPUs with redundant paths).

6. SOFTWARE SERVICES

OIT software support has also been excellent over the past two or three years. Incidences of VM, MVS or CICS failures of major consequence have been very few. After significant AIM problems that were resolved almost two years ago, this package has performed exceptionally, as well. IMS's only real concerns in the future, in regard to software reliability, are the relatively thin levels of support available for CICS and the DBMS systems; GIMS, SQL/DS and DB2.

Software licensing agreements have become troublesome sources of contention between IMS and OIT in the recent past. The 1974 Memorandum of Understanding (Transfer of Specific Directorate of Operations Responsibilities, Resources, Functions, and Materials to Director of Joint Computer Support) stipulated that OIT (really its predecessor OJCS) would provide and support operating system software, and IMS would support applications software. IMS is currently faced with the prospect of shutting off two of its CPUs because OIT does not have the funds to license the operating systems. IMS will attempt, over the next few months, to run with only five of its seven machines, providing IBM will agree to using unlicensed machines for backup and system testing scenarios.

An area requiring software coordination between IMS and OIT that is not formally documented is that of new requirements. It is not reasonable to expect OIT to be able to support IMS software requirements (especially licenses) without a reasonable time in which to adjust their budget. IMS, therefore, proposes to provide the necessary funds to pay for newly-required licenses for the first two years (provided OIT has not received prior warning of the requirement). After the two-year grace period, however, it would be OIT's responsibility to include this expense in its budget.

7. DEVELOPMENT SERVICES

OIT is the Agency's primary source of computing talent and resources. The DO, through the auspices of IMS, has been the recipient of many data processing benefits as a result of OIT development projects (SAFE and AIM being two outstanding examples). IMS is looking forward to continued benefits as a result of OIT development efforts.

Three new areas in particular seem very promising; (1) the standard Agency workstation (IMS plans on using this device in future applications); (2) LAN development (IMS's data processing initiative for the 1990s (DOLPHIN) will use a distributed architecture, and an OIT-developed LAN would be an attractive candidate for the distributed node), and finally; (3) AI initiatives (again IMS's DOLPHIN project, will be considerably enhanced if AI techniques such as natural language processing and expert systems can be employed, and assistance from OIT in these areas could be very helpful).

A final area of development that is extremely important to IMS is the OIT effort to provide connectivity to the DDS&T Wang Alliance systems through Wang VS minicomputers. The DO has a large number of Wang Alliance systems installed in Headquarters, and it is unrealistic to think that they can be replaced by the new Agency workstation in any short period of time. If, at a minimum, these Wang systems could be connected to IMS's mainframe systems to participate in the DO-wide AIM electronic mail network, the usefulness of this equipment would be significantly enhanced.

SUMMARY

The core services that IMS must receive from OIT to meet its automation goals are:

(1) Reliable secure PBX operation (for telephones and workstations).

(2) Reliable and timely cable delivery services.

(3) A dependable and responsive electronic mail system (AIM).

(4) Dependable computer operations services.

(5) Dependable computer hardware with upgrades as required.

(6) Reliable software support and responsiveness to new requirements.

(7) Development support, especially in the areas of; workstations, LANs, AI and Wang connectivity.

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